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Field Service Procedure

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Divan Ventilator Front Bezel and Related Components Replacement

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Divan Ventilator Front Bezel and Related Components Replacement

Replacement Procedures

This procedure includes instructions for the replacement and testing of the following Narkomed 6000 Divan front bezel components:

--Divan Front Bezel Assembly P/N AF00468 and SEAF00468

--Divan Front Bezel Encoder P/N 8200957

--Divan Front Bezel Display PCB P/N 8202101

--Divan Front Panel LED & Bargraph P/N 8201090 and Alphanumeric display P/N 1827456

Divan Front Bezel Assembly Replacement Procedure:

1. Turn the System Power switch to STANDBY.

2. Disconnect AC Power from the machine and pull all circuit breakers to their 'out' position.

CAUTION: use ESD precautions when handling any of the Divan electronics assemblies. These boards contain static sensitive components

3. Remove the front bumper from the ventilator chassis by removing the five screws on the underside of the front bumper; one screw at the right side rail; three screws securing the left side of the bumper to the bag pole, in order to swing the bumper away from the ventilator. See Figure 1.

4. Remove the three screws holding the front bar (these screws also retain the front display bezel of the ventilator). Set the bar aside and carefully pull the front display bezel downward; carefully disconnect its ribbon cable from the motherboard.

5. Record the removed panel S/N located at the lower right corner of the bezel PCB.

6. Record the S/N of the replacement panel. Set the display bezel in place and reconnect its data cable to the motherboard. While holding the bezel in place, reattach the front bar with the three screws that were previously removed.

7. Reinstall the front bumper.

8. Restore AC power and enable the circuit breakers.

9. Turn the System Power switch to ON and verify all front panel Leds illuminate, then verify the ventilator successfully completes its self-test routine.

Replacement Procedures (continued)

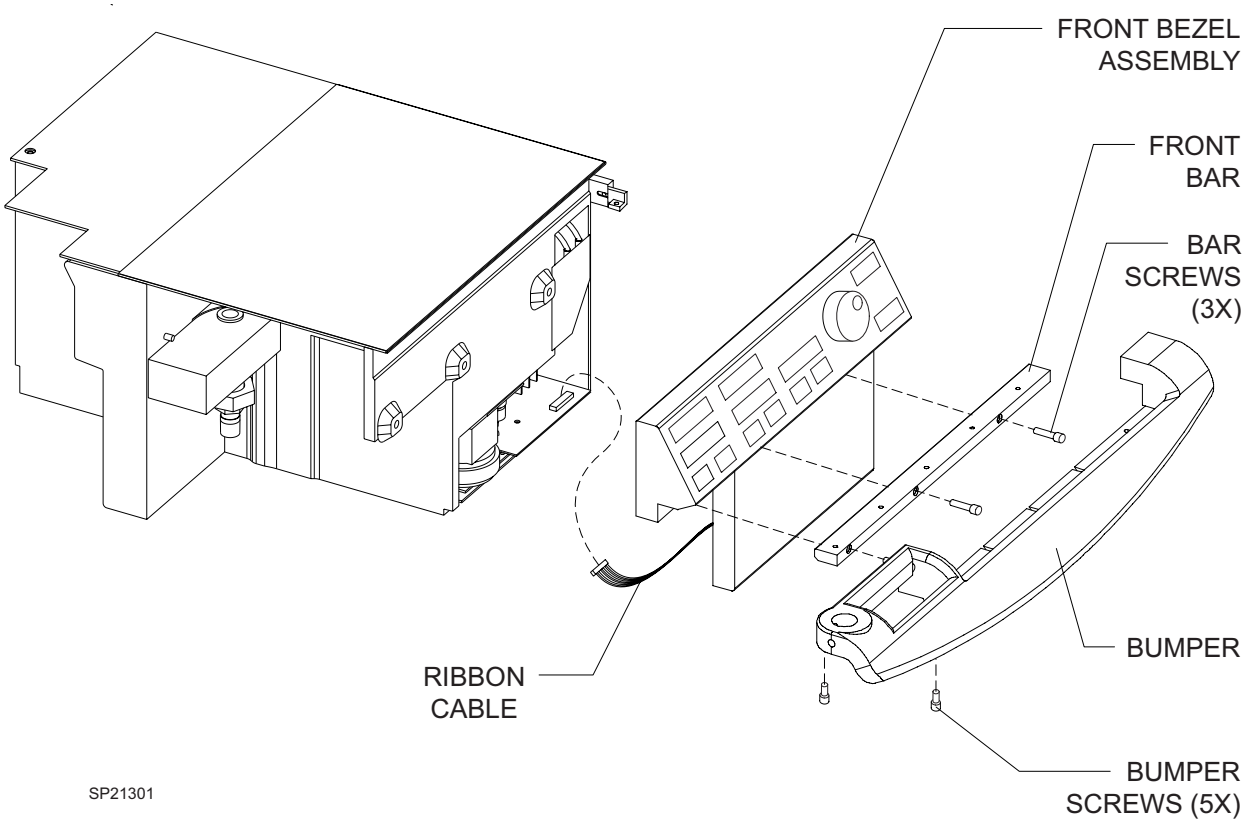

FIGURE 1. Divan Front Bezel Assembly

Divan Front Bezel Encoder Replacement Procedure:

1. Turn the System Power switch to STANDBY.

2. Disconnect AC Power from the machine and pull all circuit breakers to their 'out' position.

CAUTION: use ESD precautions when handling any of the Divan electronics assemblies. These boards contain static sensitive components

3. Remove the front bumper from the ventilator chassis by removing the five screws on the underside of the front bumper; one screw at the right side rail; three screws securing the left side of the bumper to the bag pole, in order to swing the bumper away from the ventilator. See Figure 1.

4. Remove the three screws holding the front bar (these screws also retain the front display bezel of the ventilator). Set the bar aside and carefully pull the front display bezel downward; carefully disconnect its ribbon cable from the motherboard.

5. Pull the encoder knob off the shaft and remove the retaining nut securing the encoder assembly to the panel. Record its two-digit engraved date code. See Figure 2.

6. Carefully disconnect the translucent data cables and encoder wire harness from the PCB.

7. Remove the eight screws around the PCB perimeter securing it to the panel chassis.

8. Record the two-digit date code (see Figure 2) on the replacement encoder. Apply a small amount of purple Loctite (222) to the threads of the encoder. Align the notch on the encoder to the socket on the panel and reinstall the panel nut. Reattach the encoder knob.

CAUTION: Do Not allow Loctite to migrate into the encoder's moving parts.

9. Reconnect the data cables to the PCB. Connect the encoder wire harness to the PCB. The green wire on the five-pin connector attaches to Pin 1 on the PCB as identified by a white marking. The blue wire on the two-pin connector attaches to Pin one on the PCB as identified by a white marking. See Figure 3.

CAUTION: these wire harnesses are not keyed. Be certain they are attached in the proper orientation as noted in the above step.

10. Reinstall the eight screws to secure the PCB to the panel chassis. Apply a small amount of Red Insulating Varnish between the screws and the PCB.

CAUTION: Do Not over-torque the mounting screws.

11. Set the display bezel in place and reconnect its data cable to the motherboard. While holding the bezel in place, reattach the front bar with the three screws that were previously removed.

12. Reinstall the front bumper.

13. Restore AC power and enable the circuit breakers.

Replacement Procedures (continued)

14. Turn the System Power switch to ON and verify the ventilator successfully completes its self-test routine. Verify the encoder increments and confirms selections properly.

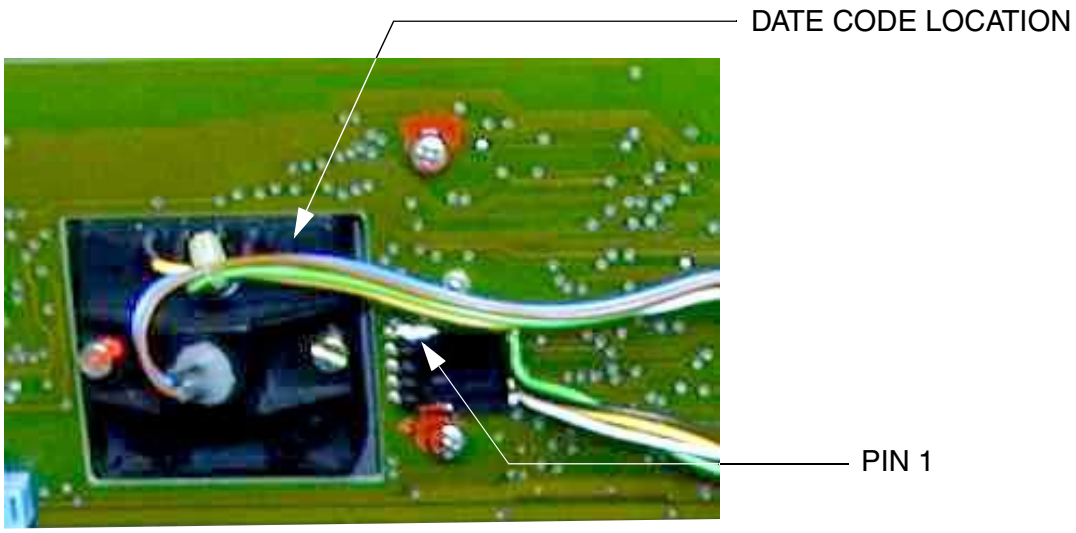

FIGURE 2.
Encoder Date Code and Pin 1 Locations

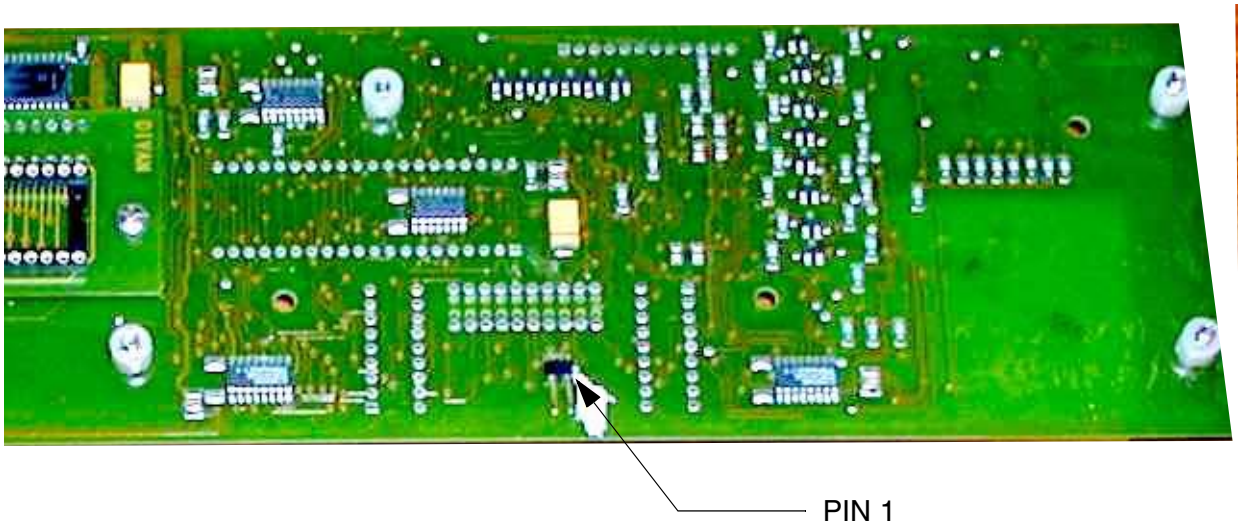

FIGURE 3.
Divan Front Panel PCB - Pin 1 Locations

Divan Front Bezel Display PCB Replacement Procedure:

1. Turn the System Power switch to STANDBY.

2. Disconnect AC Power from the machine and pull all circuit breakers to their 'out' position.

CAUTION: use ESD precautions when handling any of the Divan electronics assemblies. These boards contain static sensitive components

3. Remove the front bumper from the ventilator chassis by removing the five screws on the underside of the front bumper; one screw at the right side rail; three screws securing the left side of the bumper to the bag pole, in order to swing the bumper away from the ventilator. See Figure 1.

4. Remove the three screws holding the front bar (these screws also retain the front display bezel of the ventilator). Set the bar aside and carefully pull the front display bezel downward; carefully disconnect its ribbon cable from the motherboard.

5. Record the serial number located at the lower right corner of the original and the replacement PCB assemblies.

6. Remove the eight screws around the PCB perimeter securing it to the panel chassis. Remove the bracket securing the data cable to the ferrite blocks.

7. Carefully disconnect the translucent data cables and encoder wire harnesses from the PCB, then remove the assembly.

8. Install the replacement PCB - reconnect the data cables and encoder wire harness to the PCB. The green wire on the five-pin connector attaches to Pin 1 on the PCB as identified by a white marking. The blue wire on the two-pin connector attaches to Pin one on the PCB as identified by a white marking. Refer to Figure 2 and Figure 3.

CAUTION: these wire harnesses are not keyed. Be certain they are attached in the proper orientation as noted in the above step.

9. Reinstall the eight screws to secure the PCB to the panel chassis. Reattach the bracket securing the data cable to the ferrite blocks. Apply a small amount of Red Insulating Varnish between the screws and the PCB or ferrite mounting bracket.

CAUTION: Do Not over-torque the mounting screws.

10. Set the display bezel in place and reconnect its data cable to the motherboard. While holding the bezel in place, reattach the front bar with the three screws that were previously removed.

11. Reinstall the front bumper.

12. Restore AC power and enable the circuit breakers.

13. Turn the System Power switch to ON and verify all front panel Leds illuminate, then verify the ventilator successfully completes its self-test routine.

Divan Front Panel LED & Bargraph and Alphanumeric Display Replacement Procedure:

1. Turn the System Power switch to STANDBY.

2. Disconnect AC Power from the machine and pull all circuit breakers to their 'out' position.

CAUTION: use ESD precautions when handling any of the Divan electronics assemblies. These boards contain static sensitive components

3. Remove the front bumper from the ventilator chassis by removing the five screws on the underside of the front bumper; one screw at the right side rail; three screws securing the left side of the bumper to the bag pole, in order to swing the bumper away from the ventilator. See Figure 1.

4. Remove the three screws holding the front bar (these screws also retain the front display bezel of the ventilator). Set the bar aside and carefully pull the front display bezel downward; carefully disconnect its ribbon cable from the motherboard.

5. Remove the eight screws around the PCB perimeter securing it to the panel chassis. If replacing the Bargraph/LED display you must also remove the two remaining screws.

6. Carefully disconnect the translucent data cables and wire harnesses from the PCB, then remove the assembly.

7. Skip the next three steps if you are replacing the Bargraph/LED display.

8. Locate the alphanumeric display that is being replaced. Note its orientation and carefully remove it by firmly supporting the daughter board PCB and carefully pulling it straight out of its socket. See Figure 4.

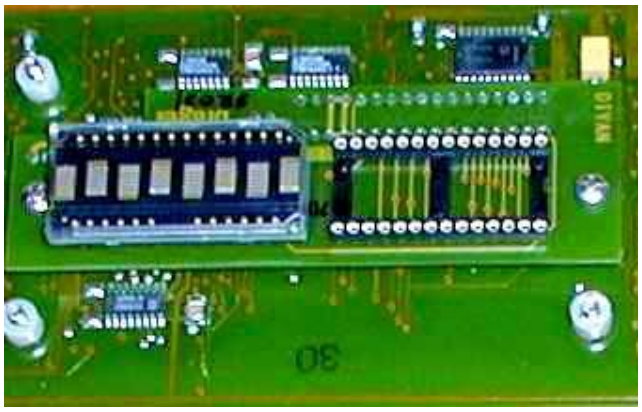

FIGURE 4. Alphanumeric Display

9. Align the pins on the replacement display with the corresponding sockets on the daughter board and carefully install the replacement display. Verify all pins engage and the LEDs are completely seated.

NOTE: The corner cut out on the display must point towards the word 'DIVAN' on the daughter board PCB.

10. Skip the next two steps.

Replacement Procedures (continued)

11. Locate the Bargraph and LED display that is being replaced. Note its orientation and carefully remove it by firmly supporting the PCB and carefully pulling it straight out of its socket. See Figure 5.

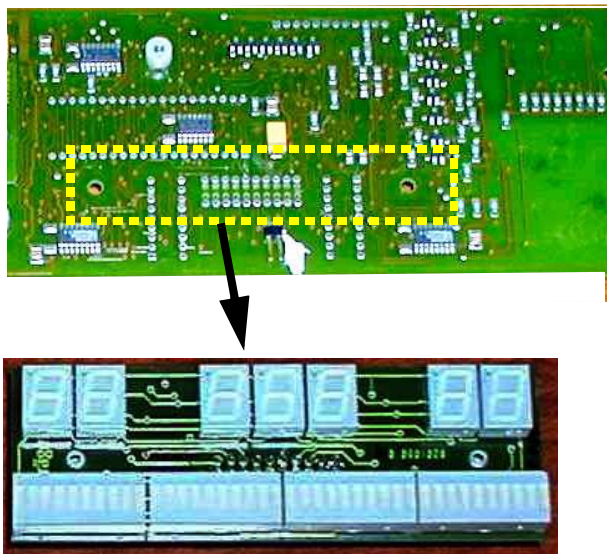

FIGURE 5. Bargraph Display

12. Align the pins on the replacement LED PCB with the corresponding sockets on the motherboard and carefully install the PCB. Verify all pins engage and the display is completely seated.

13. Reinstall the PCB and reconnect the data cables and encoder wire harness to the PCB. The green wire on the five-pin connector attaches to Pin 1 on the PCB as identified by a white marking. The blue wire on the two-pin connector attaches to Pin one on the PCB as identified by a white marking. Refer to Figure 2 and Figure 3.

CAUTION: these wire harnesses are not keyed. Be certain they are attached in the proper orientation as noted in the above step.

14. Reinstall the eight screws to secure the PCB to the panel chassis. Reattach the bracket securing the data cable to the ferrite blocks. Apply a small amount of Red Insulating Varnish between the screws and the PCB or ferrite mounting bracket.

CAUTION: Do Not over-torque the mounting screws.

15. Set the display bezel in place and reconnect its data cable to the motherboard. While holding the bezel in place, reattach the front bar with the three screws that were previously removed.

16. Reinstall the front bumper.

17. Restore AC power and enable the circuit breakers.

18. Turn the System Power switch to ON and verify all front panel Leds illuminate, then verify the ventilator successfully completes its self-test routine.

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